

Teacher's Guide



Molding and Casting Tour

AUDIENCE	5th through 8th Grade (Tour may be modified for adult audiences)
DESCRIPTION	A two and one half-hour tour that accentuates the jobs and work areas of Hopewell Furnace in the 1830's. The primary thrust of program is the molding and casting process to be performed by the students. Each student will make use of a sand mold, a pattern and a safe molten iron substitute (hydrocal) in order to produce a cast product.
REQUIREMENTS	Class size for this tour will be kept to 25 students. It is required to have one chaperone per 10 students. Students must be made aware of the positive behavior that is expected during the tour and lab activities. Teachers are required to maintain the attention of the students; the Ranger is not responsible for discipline.
THEME	The molding and casting of iron products was the main thrust of Hopewell Furnace during its heyday in the 1830's.
HOPEWELL FURNACE PROGRAM OBJECTIVES	<ol style="list-style-type: none">1. Visitors/students will be able to describe how the furnace community functioned.2. Visitors/students will list the many occupations that were important to the industrial success of Hopewell.3. Visitors/students will be able to relate Hopewell Furnace to technological developments in iron-making.4. Visitors/students will identify the methods that were used to produce cast products at Hopewell Furnace.
RELATED OBJECTIVES OF LOCAL SCHOOLS	<ol style="list-style-type: none">1. Students will learn molding and casting techniques used by 19th century ironworkers.2. Students will learn how natural resources influenced economic development.3. Students will identify some occupations of the 1800's.4. Students will learn about jobs based on sex stereotyping in the 1800's.5. Students will identify differences in the tools used today and the tools used in the 19th century iron industry.6. Students will learn how water may influence the development of an area.7. Students will understand the need for cooperation within a working community.8. Students will understand how industry is dependent upon the availability of raw materials.9. Students will appreciate the value of human resources.10. Students will learn why moulders of the 19th century were considered skilled workers.11. Students will understand the relationship of the pattern, mold and cast.12. Students will learn about local history.13. Students will learn about some aspects of the industrial revolution.14. Students will learn the importance of a flow chart.15. Students will understand some of the hardships of earlier societies.